Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER– II (Old course)• REMEDIAL EXAMINATION – SUMMER 2015

Subject Code: 1722104 **Date:16/05/2015**

Subject Name: Energy Conservation and Management

Time: 02:30 pm to 5:00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Explain the principles of energy conservation.	**07**
	(b)	What are the advantages of Renewable energy?	**07**
Q.2	**(a)**	Discuss with flow diagram Hydro power plant. State its advantages over steam power plant.	**07**
	(b)	What are the factors influencing energy management program?	**07**
		OR	
	(b)	Define and explain Energy Audit.	**07**
Q.3	**(a)**	What are the advantages of Diesel Generator set for power generation?	**07**
	(b)	Briefly explain Electricity saving techniques. State various energy efficient machines.	**07**
		OR	
Q.3	**(a)**	Explain Green house concept.	**07**
	(b)	What do you mean by Cogeneration? Explain cogeneration process in detail.	**07**
Q.4	**(a)**	What do you understand by pay back period and Internal rate of return? A cogeneration plant has capital cost of Rs. 22, 20,000/- and Rs. 42,000/-as operative cost. Energy / Cost Savings anticipated for this plant is Rs 4, 86,000/-Find its pay back period.	**07**
	(b)	Discuss in details: Power factor and Load factor.	**07**
		OR	
Q.4	**(a)**	Briefly discuss Energy conservation in Internal combustion engine.	**07**
	(b)	Explain working of Back pressure steam turbine.	**07**
Q.5	**(a)**	If you are appointed as Energy Manager in a manufacturing unit, how will you justify your role?	**07**
	(b)	Discuss any two terms: Demand management, Life cycle costing, Internal Rate of return.	**07**
		OR	
Q.5	**(a)**	Discuss energy conservation opportunities in HVAC motor.	**07**
	(b)	List ten strategic measures for meeting the energy consumption.	**07**

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